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AppleShare File Server: Allowing Apple II Network Startup

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TOPIC --

This article tells how to set up your AppleShare File Server software so
that Apple IIGS and Apple IIe systems can start up over the network.

An earlier version of this article appeared in the June 1990 "TechBeat" and
in the "Apple II Tech Bulletin" for February-March 1990. Since then, new
versions of the Apple IIGS and Macintosh operating systems have been
released, requiring updated documentation.

DISCUSSION ---

Assuming the hardware is already set up, the installation process should
take from one to two hours. This article assumes you are installing
AppleShare on a newer Macintosh running System 6.0.7. Note: If you are
installing on one of the older Macintosh computers, for example an SE/30,
System 6.0.5 would be an acceptable replacement for System 6.0.7.

This article also applies to those with existing AppleShare File Servers.
Where necessary, we will explain what material to skip over.

Besides Macintosh system software, you need the AppleShare File Server
software (version 2.0.1), Apple part number M0548/B. Finally, you need
Apple IIGS System Software Update Version 5.0, Apple part number A0013LL/A.
(This version is now shipping with version 5.0.4 in the box.)

Note that IIGS System 5.0.4 is a three-disk set. The third disk, a
Macintosh disk called "Apple II Setup", is essential. You will need to buy
at least one IIGS System 5.0 Software Update, because this third disk does
not ship with new IIGS systems. Table 1 lists the disks required. You also
need one blank 800K disk.

Note: For future reference, if a new version of IIGS system software is
released, use the complete three-disk set from that system instead of
version 5.0.4.

Table 1: Required Disks

Disk Name   Format   Comment

System Startup 6.0.7   Mac 1.44MB
System Additions 6.0.7   Mac 1.44MB
Network Products Installer 6.0.7   Mac 1.44MB

AppleShare File Server 2.0.1 Installer Mac 800K   Part of A'Share 2.0.1.
AppleShare File Server 2.0.1 Admin   Mac 800K   Part of A'Share 2.0.1.
Apple II Setup 2.0.1   Mac 800K   Part of A'Share 2.0.1.
-->Obsolete disk!

/System.Disk   ProDOS 800K Part of IIGS System 5.0.4.
/System.Tools   ProDOS 800K Part of IIGS System 5.0.4.
Apple II Setup 2.1.3   Mac 800K   Part of IIGS System 5.0.4.
-->New version.

1. Setting up the AppleShare File Server

Follow these steps to set up the AppleShare File Server:

1) If you have an existing server, start up from the Network Products
   Installer disk and install "Apple II Setup (v2.0.1)". (Others should
   skip to the next paragraph.)

2) When the Installer prompts you for the "Apple II Setup" disk, insert
   the Apple II Setup version 2.1.3 disk that came with IIGS System
   Software 5.0.4.

Do not insert the obsolete Apple II Setup disk that comes in the box with
AppleShare 2.0.1. For those with an existing file server, proceed to
Section 2, "Preparing AppleShare for Apple II Users".

If you haven't set up your server yet, here is how to do it:

1) Boot the Macintosh with the System Startup disk

2) Launch HDSC Setup and initialize the hard disk. When giving the hard
   disk a name, use a short name that fits ProDOS conventions. The name
   must begin with a letter (A to Z) and contain nothing but letters,
   numerals and periods. No spaces. Lower case is permitted. For
   this example, we will name the server volume "A2".

3) After the hard disk has been initialized, quit HDSC Setup and launch
   the Installer. Click "Easy Install".

4) When the installation is complete, quit the Installer.

5) Double-click on the hard disk icon and open the System Folder.

6) Drag "Easy Access," and any printer drivers you don't need, to the
   Trash. You can also delete MultiFinder. If you won't be doing any
   printing from the file server, you can throw away Backgrounder and
   PrintMonitor.

7) When you are done, select "Empty Trash" from the Special menu and close
   all open windows. Then select "Shut Down" from the Special menu.

With the cleanup out of the way, it's time to install the software:

1) After the Macintosh ejects the System Startup disk, restart from the
   Network Products Installer disk.

2) Launch the Installer and select "AppleShare File Server (v2.0.1)" and
   holding down the Shift key, select "Apple II Setup (v2.0.1)".

3) Click Install. The Installer will prompt you for the "AppleShare
   File Server" disk (that's the AppleShare Installer disk), and shortly
   thereafter, the "AppleShare Administration" disk.

4) When it prompts you for the "Apple II Setup" disk, insert the Apple II
   Setup version 2.1.3 disk that came with IIGS System Software 5.0.4.

   Important: Do not insert the obsolete Apple II Setup disk that comes in
   the box with AppleShare 2.0.1

5) When the Installer is finished, quit and restart the Macintosh, letting
   it start up from the hard drive.

6) The hard drive isn't an AppleShare File Server yet, so you must set
   it up. Open the System Folder on the hard drive and double-click
   "AppleShare Admin".

7) When asked if you want to "Prepare volume 'A2' for use with
   AppleShare?", click OK. You'll be asked to give the file server a name,
   for example, "Apple II Forever".

8) Next, the system will prompt you for a Users and Groups file. Open
   the Server Folder and click "New". Create users and groups according to
   your needs and preferences, starting with the Administrator.

9) When you are done, select "Save Users and Groups as…" from the File menu
   and save the Users and Groups in the Server folder.

2. Preparing AppleShare for Apple II Users

Here's how to prepare AppleShare for Apple II Users:

1) If you haven't done so, get into the AppleShare Admin program. (There is
   no need to shut down your server to do this.)

2) Under the Server menu select "Server Info" and click on the check box
   marked "Apple II Features".

3) Click "Save". Quit the AppleShare Admin program.

4) If you were updating an existing file server, shut down the server
   and restart. Others can merely select "Restart" from the Special menu
   to restart the Macintosh. It will come up as an AppleShare File Server.

If you want the file server to support network startup only for Apple IIe
users, the server is now ready to start them up over the network, once you
set the access privileges on the volume. Users must be able to "See Files,
See Folders" to start up.

To set the access privileges, follow these steps:

1) Get into AppleShare Admin and select "Volume List" from the Volume menu.

2) Double-click the server volume.

3) Set the access to "See Files, See Folders" and apply the changes to
   all enclosed folders -- unless you have an existing file server, in
   which case you will probably need to assign access by folder.

   Apple IIe users need "See Files, See Folders" access to the top level
   of the server startup volume. Whether you set these changes for the
   Administrator only, all users, or just the particular groups, depends
   on how you have planned your server.

If you want IIGS users to be able to start up over the network, you should
continue with the next section, which tells you how to install IIGS system
software onto the server, over the network. This step is required only if
the IIGS users will be starting up over the network. If the IIGS
workstations have hard drives, you should set them up to start up GS/OS on
their hard drives, and install AppleShare. This way, they can mount server
volumes on the desktop, just like Macintosh users.

3. Installing IIGS System Software over the Network

Make sure you have the AppleShare File Server and the Apple IIGS connected
via LocalTalk or similar network cabling. The IIGS should have a minimum of
1MB of RAM and one Apple 3.5 Drive. (You'll save time if you equip the
IIGS with two Apple 3.5 Drives.)

When you turn on the IIGS, hold down the Control Open-Apple Escape keys to
get into the text Control Panel. If you have defined a RAM disk, make sure
you leave the system with at least 1MB of memory. Under Slots, ensure that
the Startup Slot is set to 5, and that Slot 5 is set to "SmartPort" and
Slot 7 to "AppleTalk" or "Built-In AppleTalk". Slot 1 should be set to

"Your Card", or on a ROM 03 IIGS to "Built-In AppleTalk". Exit from the
Control Panel and turn off the computer.

Be sure you have the original (unmodified) System.Disk and System.Tools
diskettes. Lock both diskettes to prevent accidental deleting of critical
files. You will also need one blank 800K disk to use as an AppleShare
startup disk. Follow these steps:

1) Insert the System.Disk and power on the IIGS.

2) When the Finder desktop appears, insert the blank disk and initialize
   it. Call it "AppleShare".

3) Launch the Installer from System.Tools. If you have two drives, eject
   the System.Disk. If you have one drive, eject the System.Tools disk.

4) Insert the blank "AppleShare" disk you just initialized and click the
   "Disk" button until its name appears.

5) Select the installer script entitled "AppleShare on 3.5 Disk" and
   click Install. Before installing, the system will display an alert
   message explaining not to install this on your only copy of the system
   disk. Click "Perform This Update" to continue. Some disk swapping will
   be required.

6) When the installation is complete, make sure the AppleShare startup
   disk you just created is in drive 1, and restart. To save time, you can
   hold down the Control Open-Apple Reset keys rather than quitting to the
   Finder and doing a Shutdown.

7) When the Finder desktop is on the screen, use the mouse to select
   the graphic Control Panel under the Apple menu. If it isn't already
   highlighted, click on AppleShare.

8) Select the file server and connect using the Administrator name and
   password. Then select the AppleShare File Server volume and mount it.
   Close the graphic Control Panel.

9) Run the Installer on System.Tools. Click the "Disk" button until the
   file server name appears -- in our example, "A2".

Here is how to install some files over the network onto the file server
volume:

1) Select the following scripts: Server Network Startup, Server Quick
   Logoff and optional scripts.

   For optional scripts, select anything that IIGS systems staring over
   the network will require. For instance, if you need access to a network
   printer, like a LaserWriter or an AppleTalk ImageWriter, install those
   scripts.

2) Select the optional scripts you need by holding down the Open Apple key

when you click on them.

   Caution: do not try to install "Latest System Files" or "Latest System
   Files (No Finder)", or IIGS users will not be able to start up over the
   network. Note: There was an error in the original version of this
   article that indicated you should install the "Latest System Files (No
   Finder)" script. It was corrected in a subsequent issue of "TechBeat."

   When you click "Install", the system installs the IIGS system software
   over the network. To show network activities, double arrows at the top
   left of the screen will flash. The installation may take some time.

3) Before you run off to grab a coffee, wait for the alert message
   telling you to "install this update only on a file server's startup
   volume". Click "Perform This Update" to continue.

4) When the installation is complete, hold down the Control Open-Apple
   Escape keys to enter the text Control Panel.

5) Under Slots, set the startup slot to 7. The next time you start up the
   IIGS, it will be over the network. First, however, you have to set up
   the server for IIGS users. See section 4 below.

4. Setting up the File Server for IIGS Users

Follow these steps:

1) Leaving the file server running, get into the AppleShare Admin program.

2) Use the Shift-click method to highlight all the IIGS users you want to
   start up over the network.

3) Select "Set Startup" under the Apple II menu.

4) To have IIGS users start up into the Finder, select "Finder" under the
   System folder. You can also select a default network printer if one is
   available, and if you installed the drivers for them in section 3. Note
   that any printers to be selected must be powered up and visible over
   the network.

For Apple IIe users, you can set the startup application to be any ProDOS 8
application (file type SYS). Apple IIe systems that will start up over the
network must be equipped with AppleShare Workstation cards and 128K of RAM.
They must also be enhanced. (If you will be running Aristotle Admin, you'll
need an Apple II Memory Expansion card with at least 256K of RAM. IIGS
users who want to run Aristotle Admin need to define a RAM disk with 256K
of RAM.) IIGS users can also start up to any ProDOS 8, ProDOS-16, or GS/OS
application.

When you have finished setting up the startup information for your Apple II
users, all that remains is setting the access privileges:

1) Under the "Volumes" menu, select "Volume List", double-click on the
   server volume, and a dialog box will be displayed.

2) Set the access privileges so that everyone can "See Files, See
   Folders", and apply changes to all enclosed folders, unless you have an
   existing server.

   In such a case, you should not apply changes to enclosed folders, as
   there may be folders you do not want IIGS users to have access to. IIGS
   users need "See Files, See Folders" access to the top level of the
   server startup volume, the System Folder, and all folders within it.
   They will also need the same access to the Icons folder, which holds
   IIGS Finder icons. Users may experience errors if they don't have
   sufficient access for various operations. If you find some IIGS
   software that needs write access to a particular folder, you should
   lock that folder so that adventurous users can't throw it away.

3) When you are finished setting up access privileges, quit from the
   AppleShare Admin program.

5. Booting over the Network

You should now be able to start up over the network with a IIGS or a IIe. A
IIGS starting up over the network displays several different screens during
the startup process. You can verify you installed the correct version of
the Apple II Setup on your file server by watching the "Starting up over
the network" screen. It should say "2.1.3 GS.OS" at the top right if you
used version 2.1.3, which comes with IIGS System 5.0.4.

After a few moments, the system prompts the user for a user name or allow
guest access, if it is enabled. Be sure to test server logon as a normal
user, and not just as the Administrator. That way you can uncover any
access privilege problems. If you ever see an error message, take note of
any error codes and compare them to the list in the back of the "ProDOS
Technical Reference Manual" or in the "Apple IIGS GS/OS Reference." Two of
the most common errors are listed in the Appendix at the end of this
article. You'll find that most errors are easily explainable unless you
mixed up software versions during installation.

You have now completed the installation of software to allow IIGS and IIe
users to start up over the network.

Appendix: Common Errors

Cannot load file Start.GS.OS
Error = $0046
This is the message you get if you failed to follow Step 3 correctly. It
is a ProDOS file system error $46, which means "Path not found". The GS/OS
files the system requires to start up could not be found on the file server.
If you have multiple file-server volumes, verify you installed the IIGS System
Software over the network onto the server startup volume.

Unable to load descriptors
Error was $004E
This message denotes an access privileges problem. It is a ProDOS file
system $4E error. This means the user had insufficient access privileges
to complete the required operation, or, possibly, the file was locked. Most
likely, you haven't given the user who experienced the error "See Files,
See Folders" access to the top level of the server startup volume, the
System folder, and all folders within it.

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